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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,011	10/24/2006	Barrie Robert Finnin	U 016144-0	7373
140	7590	03/24/2010		
LADAS & PARRY LLP 26 WEST 61ST STREET NEW YORK, NY 10023			EXAMINER KERNS, KEVIN P	
			ART UNIT 1793	PAPER NUMBER
			NOTIFICATION DATE 03/24/2010	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

nyuspatactions@ladas.com

Office Action Summary

Application No.

10/568,011

Applicant(s)

FINNIN, BARRIE ROBERT

Examiner

Kevin P. Kerns

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/226)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In this instance, the replacement abstract of January 7, 2010 is not on a separate sheet (spans 2 pages), has over 150 words, and includes the legal term "comprises" in the 5th line.

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.

- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

In this instance, the specification continues to lack a portion of section headings, including that a description of the DRAWINGS be made as a heading on page 12, after line 19. In addition, "page 2, after line 17" (on page 2 of the amendments to the specification dated January 7, 2010) should be changed to "page 13, after line 25".

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-24 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No. 7,234,505. Although the conflicting claims are not identical, they are not patentably distinct from each other because US 7,234,505 discloses a system and method of creating an expansion control to prevent premature solidification of the molten metal. US 7,234,505 also teaches flow velocity of molten metal in the runner for solidification control. Although independent claims 1, 11, and 17 of the present application do not include some additional limitations set forth in the claims of US Patent No. 7,234,505, it would have been obvious to one of ordinary skill in the art to exclude these additional features, as open-ended language exists in the present application, and for the additional reasons set forth in the Response to Arguments section 8.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Murray et al. (WO 99/28065 – cited in applicant's Information Disclosure Statement of January 5, 2007, and equivalent to US 6,634,412).

Regarding independent claims 1, 11, and 17, Murray et al. disclose a high pressure method and apparatus of die casting an alloy in a die cavity along a runner that comprises a molten metal flow device (abstract; page 1, lines 3-6 and 30-31; page 2, lines 1-20 and 30-32; page 3, line 1 through page 5, line 26; page 6, line 29-32; page 7, lines 1-30; page 8, lines 1-19; page 11, line 28 through page 13, line 13; page 18, line 6 through page 20, line 21; page 22, lines 10-31; page 23, lines 1-26; and Figures 1, 2, 5-9, and 12-14), such that method and apparatus include providing molten metal alloy (e.g. magnesium, aluminum, zinc etc. having different flow properties and solids contents) that is caused to flow in the first part and the second part of the length of the flow path of the molten metal flow device, with the second part of the length of the flow path having a flow exit module (FEM), wherein the velocity decreases from the level at an outlet of the runner to control the solidification of the molten metal (page 4, lines 11-16; and page 5, lines 7-11).

Regarding claims 2, 12, and 18, Murray et al. disclose that the alloy flow velocity in the runner is about 100-150m/s (page 5, lines 7-11).

Regarding claims 3, 13, and 19, Murray et al. disclose that the increase in cross sectional area decreases with the velocity of the molten alloy (abstract; page 2, lines 30-32; and page 3, lines 1-29).

Regarding claims 4-6, 14-16, and 20-22, Murray et al. disclose the claimed velocity of the molten metal, such that it would be inherent to produce a solids content between 17-25% depending on the temperature and pressure inside the high pressure casting apparatus (page 2, lines 4-20).

Regarding claims 7-10, 23, and 24, Murray et al. disclose that a gate is the outlet end of the flow path, and is operable to selectively provide a constriction or to not provide a constriction, depending on the embodiments (differing dimensions) of the gate systems disclosed by Murray et al. (page 6, lines 29-32; page 7, lines 1-5; and Figures 5 and 12-14).

Response to Arguments

7. The examiner acknowledges the applicant's amendment received by the USPTO on January 7, 2010. The amendment overcomes the prior objection to claim 11, as well as a portion of the prior objections to the abstract and specification. However, the replacement abstract and addition of four specification headings (the last heading of which is incorrectly added after page 2, after line 17) continue to be objected to for the reasons set forth in above sections 1 and 2. In addition, the claims continue to be subject to double patenting rejections in above section 4, and for the additional reasons discussed in the following section. Claims 1-24 remain under consideration in the application.

8. Applicant's arguments filed January 7, 2010 have been fully considered but they are not persuasive.

With regard to the applicant's remarks/arguments on pages 12-18 of the amendment, the applicant argues that Murray et al. disclose a different process from that of the claimed invention. However, the examiner respectfully disagrees. In this instance, the applicant has indicated that the claimed invention is to a FEM (flow-path exit module) and that Murray et al. teach a CEP (controlled expansion region), and wherein these two aspects allegedly are different in that FEM casting would preclude a change of state of the alloy from a molten state to a semi-solid state (in particular, refer to pages 15 and 16 of the applicant's remarks section). Based on the invention as claimed, the examiner determines that both inventions are substantially equivalent unless the applicant claims the exact location where the change of state does not occur. For example, in an injection die casting method, molten metal travels within the runner as either molten or semi-solid and then exits into the gate. Depending on the placement of the heaters around the mold, the metal either remains molten or semi-solid in the gate and then solidifies in the mold cavity. The invention as claimed is drawn to the increase of the cross-sectional area to reduce the alloy flow velocity. However, Murray et al. also substantially teach to decrease the flow velocity of the alloy. Therefore, it is believed that the molten metal of Murray et al. will be in the same claimed state as the claimed invention, unless the applicant would specifically claim the details of how the decreasing of the velocity would preclude a change of state. Since more details of the claims would be required to overcome the Murray et al. reference (including the

applicant's dependent claims discussed throughout pages 16-18 of the remarks section, and also in comparing the claims of the application with those of the obviousness-type double patenting rejections in view of U.S. Patent No. 7,234,505, as discussed on pages 12 and 13 of the remarks section), the present claims are rejected based on the broadest reasonable interpretation in view of Murray et al. As a result, claims 1-24 remain rejected.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin P. Kerns whose telephone number is (571)272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jessica Ward can be reached on (571) 272-1223. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Primary Examiner
Art Unit 1793

/Kevin P. Kerns/
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March 16, 2010